

PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

PCT

To:

see form PCT/ISA/220

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43bis.1)

Date of mailing

(day/month/year) see form PCT/ISA/210 (second sheet)

Applicant's or agent's file reference
see form PCT/ISA/220

FOR FURTHER ACTION
See paragraph 2 below

International application No.
PCT/B2005/000458

International filing date (day/month/year)
23.02.2005

Priority date (day/month/year)
24.02.2004

International Patent Classification (IPC) or both national classification and IPC
B21C47/14, F16C17/03

Applicant
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1. This opinion contains indications relating to the following items:

- ☒ Box No. I Basis of the opinion
- ☐ Box No. II Priority
- ☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- ☐ Box No. IV Lack of unity of invention
- ☒ Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- ☐ Box No. VI Certain documents cited
- ☐ Box No. VII Certain defects in the international application
- ☐ Box No. VIII Certain observations on the international application

2. **FURTHER ACTION**

If a demand for international preliminary examination is made, this opinion will usually be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA"). However, this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of three months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA:



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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2005/000458

Box No. I Basis of the opinion

1. With regard to the **language**, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.
☐ This opinion has been established on the basis of a translation from the original language into the following language , which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).
2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:
 - a. type of material:
☐ a sequence listing
☐ table(s) related to the sequence listing
 - b. format of material:
☐ in written format
☐ in computer readable form
 - c. time of filing/furnishing:
☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.
3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.
4. Additional comments:

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY**

International application No.
PCT/IB2005/000458

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)	Yes: Claims	2,7,9-18
	No: Claims	1,3-6,8
Inventive step (IS)	Yes: Claims	
	No: Claims	1-18
Industrial applicability (IA)	Yes: Claims	1-18
	No: Claims	

2. Citations and explanations

see separate sheet

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**WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING
AUTHORITY (SEPARATE SHEET)**

PCT/IB2005/000458

Re Item V

**Reasoned statement with regard to novelty, inventive step or industrial applicability;
citations and explanations supporting such statement**

Reference is made to the following documents:

- D1: US-B2-6 543 712 (GRIMMEL RÜDIGER ET AL) 8 April 2003 (2003-04-08)
- D2: EP-A-0 684 093 (DANIELI OFF MECC) 29 November 1995 (1995-11-29)
- D3: US-A-4 643 592 (LEWIS DAVID W ET AL) 17 February 1987 (1987-02-17)
- D4: US-A-6 135 639 (DEDE MEHMET M) 24 October 2000 (2000-10-24)
- D5: US-A-5 142 177 (FUKUYAMA HIROMASA ET AL) 25 August 1992 (1992-08-25)
- D6: US-A-3 680 932 (ALBERT A. RAIMONDI) 1 August 1972 (1972-08-01)

1. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 1 is not new in the sense of Article 33(2) PCT.

The document D1 discloses (the references in parentheses applying to this document):

A laying head for forming coils using continuous and substantially rectilinear rolled products comprising a support structure (10), a rotor (18) adapted to rotate about its own axis under the action of motor means and held in rotation by the support structure (10) by means of two bearings (16,20), wherein at least one of the bearings (36) incorporates vibrations damping means.

Document D1 discloses all the features of claim 1, consequently claim 1 is not novel (furthermore D2 discloses all the features of claim 1).

2. Dependent claims 2-17 do not contain any features which, in combination with the features of any claim to which they refer, meet the requirements of the PCT in respect of novelty and/or inventive step, the reasons are as follows:
 - 2.1 The additional features of claim 2, namely incorporating vibration damping means in

each bearing is merely one of several straightforward possibilities from which the skilled person would select, by normal workshop practice, without the exercise of inventive skill, in order to further reduce vibrations of the laying head.

- 2.2 The additional features of claims 3-6 are known from D1.
- 2.3 The additional features of claim 7 are known from D5.
- 2.4 The additional features of claim 8 are known from D1.
- 2.5 The additional features of claims 9 and 10 are known from D3.
- 2.6 The feature of claim 11, namely providing an axial hydrodynamic bearing, is merely one of several straightforward possibilities from which the skilled person would select, in accordance with circumstances, without the exercise of inventive skill, in the construction of a laying head.
- 2.7 The additional features of claim 12 are known from D3.
- 2.8 The additional features of claim 13-16 are known from D6.
- 2.9 The additional features of claim 17 are known from D4.
- 3. The present application does not meet the criteria of Article 33(1) PCT, because the subject-matter of claim 18 does not involve an inventive step in the sense of Article 33(3) PCT.

The document D1 is regarded as being the closest prior art to the subject-matter of claim 18, and discloses (the references in parentheses applying to this document):

A method for vibrations damping of a laying head comprising defining activation modes of magnetic coils so that magnetic forces are produced, the resultant of which is such as to eliminate inertial forces producing vibrations in the rotor.

The subject-matter of claim 18 therefore differs from this known method in that it includes the following steps:

- a) determining by means of sensors of dynamic parameters relative to the vibrations produced by the rotor during a rotation thereof on the support structure;
- b) transmitting predetermined data, relative to the dynamic parameters, to electronic control means;

The method proposed in claim 18 of the present application cannot be considered as involving an inventive step (Article 33(3) PCT) for the following reasons, in D1 the amount and direction of the magnetic force applied can be controlled (cf. column 3, lines 19-22), this would prompt to the skilled person to use sensors to measure the vibration and use the data to control the damping means. Furthermore an example of measuring vibrations by sensors and using the data to dampen vibration is given in D3.